

24 hour air conditioning



Oil Burning
SUPERFEX
FURNACE



PERFECTION STOVE COMPANY

Why you

24-



Everyone who sees a Superfex in action easily recognizes that this remarkable new oil furnace with its 24-hour air conditioning has something that other furnaces have not. So much so, in fact, that many a home owner has been moved to ask—"Why do I need heating equipment so much better than an ordinary furnace or air conditioner?" . . . We believe that a candid look at the benefits you get from the Superfex **PLUS** advantages will convince you that **nothing less than the best would be satisfactory or economical in your home.**

Among the things of prime importance to you are personal comfort and the health and comfort of your family. To give your family's health fullest protection and to get the greatest possible amount of comfort out of every corner of your home, every hour of the day or night you really need the plus advantages of the Superfex Oil Burning Air Conditioning Furnace. Why? . . . **because no other equipment can give you what Superfex does.** Let us consider the various Superfex plus factors individually.

Superfex of course, provides the cleanliness and convenience of oil heat. The story of no coal or ashes to handle, no smoked up rooms, and all of that, has been told so well that you probably know there are a number of furnaces with which you can get these particular advantages . . . but . . . Superfex means ever so much more than that.



Children love to play on the floor . . . it's always warm there, with a Superfex.

"A man's home is his castle"
... surely you are entitled to
comfort there ALL of the time.



"This room where
loveliness abounds..."

need not be like a tomb in winter. Clean, comforting
warmth protects health and beauty.

need the PLUS advantages of **A SUPERFEX** hour air conditioning furnace

Superfex is a complete oil-burning furnace (not an ordinary furnace converted with an oil burner) operating on **a new and exclusive "three-stage" principle** providing a flexibility of heat control that no other principle of oil heating can duplicate. The three-stage feature means you have a pilot, low and high fire, each of which are brought into play, by automatic electrical controls, to maintain even temperature throughout your house all of the time. The fire does not go on and off in cold weather, but goes from low to high instead.

This means that the furnace never "goes cold," therefore does not have to be heated up again when your thermostat calls for more heat to keep the room temperature from falling. The thermostat is infinitely more sensitive to change than you are, and, as the fire has merely slowed down, not stopped, **there never is a change of temperature in the rooms sufficient for you to notice.** In mild weather when your rooms do not require heating the fire automatically is reduced to the economical pilot flame.

The next Superfex plus is a tremendously important one, because it is the key to Superfex superiority in actually keeping the "living zone"

in your home healthfully comfortable all of the time. In plain terms, it is the plus which assures even, comforting warmth on your floors, where the children like to play, and where perhaps you like to stretch your own legs in luxurious comfort sometimes, without suffering chilly ankles. It is the plus which does away for ever with the old fallacy that bedrooms just have to be clammy and tomblike when winter comes. It keeps **every corner of the house constantly warm, and air-conditioned every minute of the day and night.**

We refer to the constant air flow, or 24-hour air conditioning feature of Superfex.

Perhaps you did not know that ordinary conditioning equipment does not really give you air conditioning more than about one-third of the time. If this seems like a brash statement, just consider that a winter air conditioner

consists of heating unit, filters, humidifier and blower, automatically controlled. When the blower is circulating air through the filters, over the heating unit and humidifier you are getting conditioned air. **When the blower stops, air conditioning stops.**

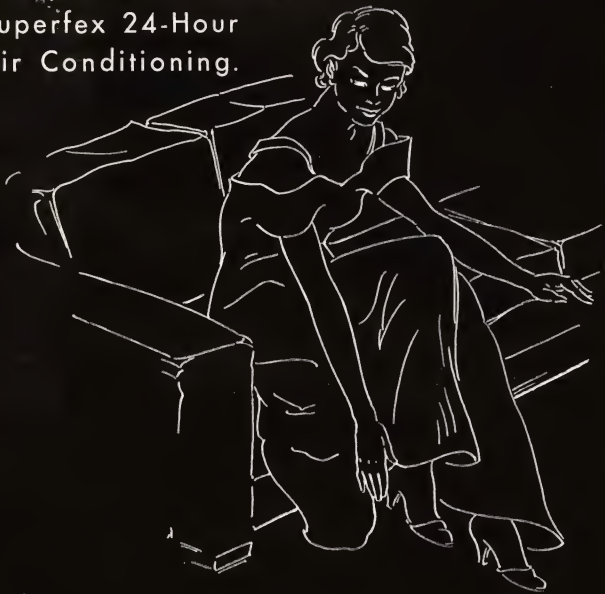


**is *all* of your home properly heated
and air conditioned *all* of the time?**

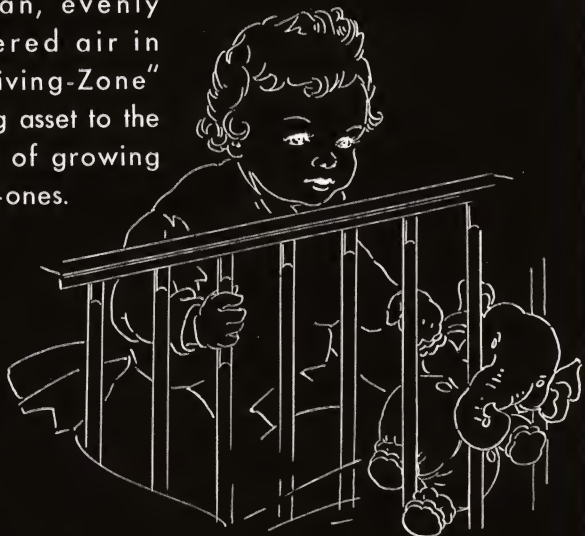
You can't live at the ceiling; ... so why waste heat there?



The "Living-Zone" is always cozily comfortable, with Superfex 24-Hour Air Conditioning.



Clean, evenly tempered air in the "Living-Zone" is a big asset to the health of growing young-ones.



In the Superfex 24-hour air conditioning system, conditioned air is continuously circulated all thru the house because the blower is going all of the time.

It is always operating in proportion to the fire, that is, swiftly for the high fire, and slowly for the low and pilot fire. Thus air conditioning, with a Superfex, never stops.

This is very definitely an important Superfex plus, because only with this principle of heat control can you have the advantages of 24-hour air conditioning. **You cannot have it with "on and off" or "stop and go" systems.**

Following this point farther, you will quickly see wherein lies the difference in "living zone" comfort with a Superfex. It is the constant flow of air throughout the house, the constant mixing and recirculation that assures you of even temperature in all parts of the house all of the time.

Any time this mixing of air stops, as it does with ordinary "stop and go" systems, a change starts to take place immediately in each room. The warm air contacting walls and furniture gives up its warmth and sinks to the floor. Within a few minutes there is a gathering of the warmest air in the upper third of the room where you do not live, and a collection of colder air in the living zone. You perhaps have noticed this condition (commonly called stratification) in homes with ordinary heating systems. Your feet and legs may feel chilly while a perfectly honest thermometer in the same room says it is 72°.

An additional important PLUS is indepen-



dence of the Superfex from electrical power failure, so far as heat is concerned. Although the automatic controls are electrical, Superfex does not leave you without heat if the power fails. You can easily remove the filters, turn to the manual controls and carry on with comfort. Off-hand you might think that the need for this plus advantage of a Superfex is only a remote possibility, but there has not been a winter in recent years entirely free from serious storms, or floods in one part of the country or another that caused trouble despite the courageous and efficient efforts of service companies to combat interruptions. It takes but one experience of this kind, involving the health of your family, to make this one PLUS important enough in itself to satisfy you that something less than the best would NOT be sufficient for your home.

We repeat (because this plus advantage is so important) that Superfex stops cold floor discomfort. Superfex keeps the

living zone at the same temperature as the upper third of the room. Superfex keeps every room to which its balanced duct system is connected at the same comforting temperature, not in waves of alternately hot and cool, but evenly, just the same one minute as the next. The mechanical details of just how Superfex gives this constant comfort, you will find on the next page, but first let us leave this thought with you.

The heating plant in your home is something with which you



will have to live, rather intimately, too, for a long time. It must be right.

It must be economical, because a wasteful heating plant cheats you of other comforts you might enjoy with your budget.

Your own (and your family's) sense of comfort is not a part-time matter. You are just as sensitive to chilly drafts, or cold corners one minute of the day as you are the next. You need equipment that will provide constant comfort all of the time.

The expense of maintaining your home goes on every minute of the day and night. You are entitled to the fullest enjoyment of it 24 hours of the day—not intermittently.

A Superfex Oil Burning Air Conditioning Furnace fulfills all of these essentials. It is the right warm air conditioning for your home.

Superfex costs less to operate and costs you little, if any, more to buy. You can live intimately with it for many years, and each year will be a source of increasing satisfaction.

You DO need all of the plus advantages of a Superfex—nothing less than the best would be right for your home.





SUPER



MODEL 200-AE Superflex Oil Burning Air Conditioning Furnace is shown above. Capacity at the bonnet, 130,000 B. t. u.; Capacity at the registers, 120,000 B. t. u. Orange-red and black enameled casing. Width, 31¼"; Length, 61¼"; Height, 64½". Shipping weight approximately 750 lbs.

MODEL 200-A is identical with above except finished in plain black baked enamel.

The Mark

PRODUCT OF PERFECT

FEX 24-Hour Oil Burning Air Conditioning Furnaces

MODEL 100-AE Superfex Oil Burning Air Conditioning Furnace is shown below. Capacity at the bonnet, 95,000 B. t. u.; Capacity at the registers, 85,000 B. t. u. Orange-red and black enameled casing. Width, 26¼"; Length, 50¼"; Height, 53¾". Shipped assembled. Shipping weight approximately 550 lbs.

MODEL 100-A is identical with above, except finished in plain black baked enamel.

Detailed specifications on inside back cover.



MODEL 300-AE Superfex Oil Burning Air Conditioning Furnace is shown above. Capacity at the bonnet, 165,000 B. t. u.; Capacity at the registers, 150,000 B. t. u. Orange-red and black enameled casing. Width, 41¼"; Length, 67¼"; Height, 64½". Shipping weight approximately 1000 lbs.

MODEL 300-A is identical with above except finished in plain black baked enamel.



of Quality

TION STOVE COMPANY • CLEVELAND, OHIO



No layers of hot and cold here, with Superfex. Dad's thermometer and the one sister puzzles over on the floor are each within one degree of the reading mother finds on the thermostat.



"Yes, it is hard to believe there is ALWAYS warm air coming up here —because our Superfex is so quiet."

How the quiet

The outstanding important point of Superfex non-stop air conditioning operation is the exclusive "three-stage" system of automatic control.

THE PILOT FIRE is just what the name implies, a stand-by fire, consuming an amazingly small amount of oil, which operates when your house is fully satisfied with heat. Any time the thermostat setting is at 72° and the temperature goes to 73°, the pilot fire will be burning. The quantity of oil burned is so small that it is fed to the burner by a simple but ingenious device called a "Miser Feeder," which dips oil from a small well in the constant level valve, a tiny spoonful at a time, feeding it through the regular large oil feed pipe. This does away with the necessity for minute valve openings that would be in danger of clogging. The "Spoon," which is the only moving part in Superfex outside of the blower, is driven by a tiny motor like that in a small electric clock, and burns so little current that you could not measure it on an ordinary meter. It was invented and patented exclusively for Superfex.

THE LOW FIRE is called the "coasting" fire. It operates at the thermostat setting, and serves to keep the house temperature even with the requirement indicated on the thermostat. So long as the setting is 72° and the temperature stays at 72° the fire remains at this stage.

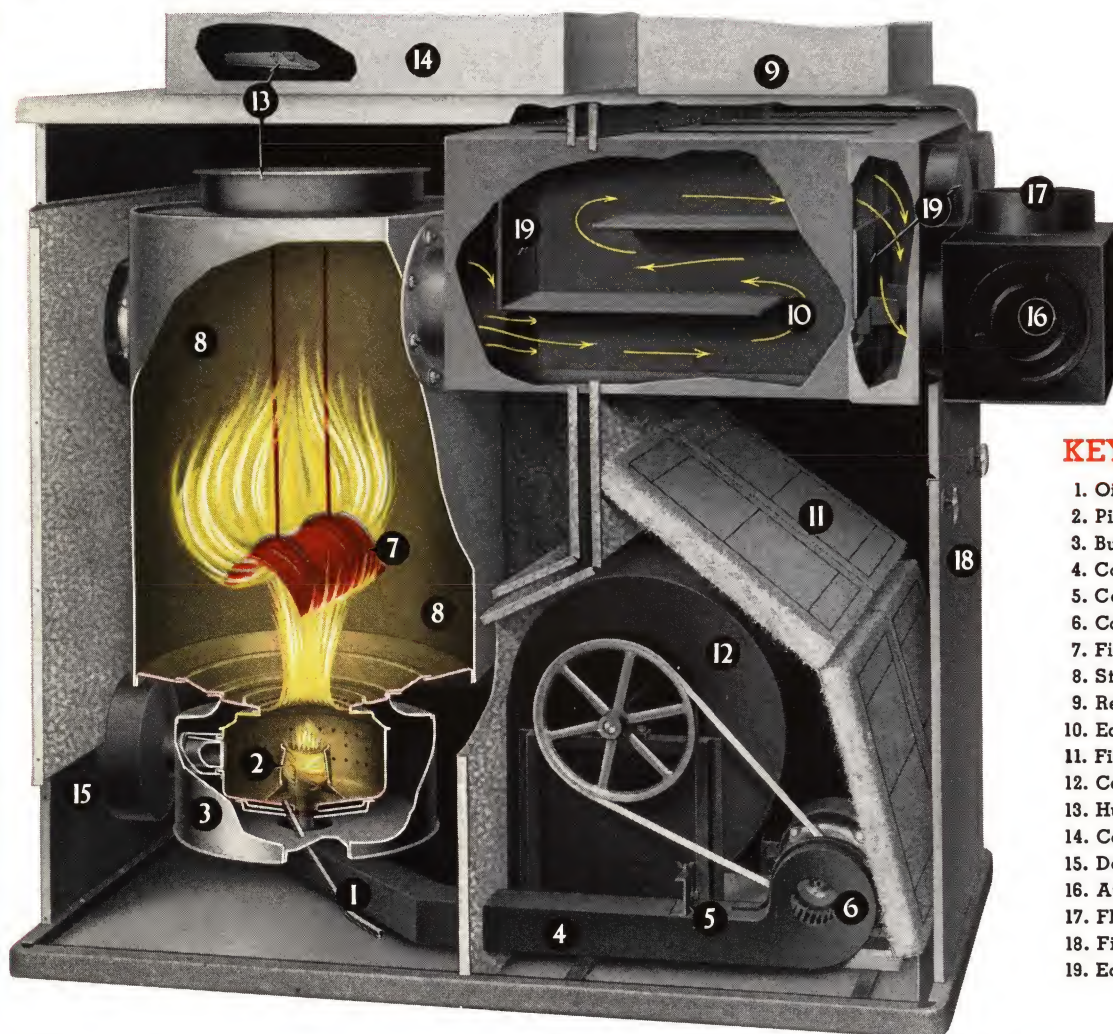
THE HIGH FIRE or "booster" goes into operation only when the temperature starts to drop one degree below the thermostat setting. It prevents any drop in house temperature sufficient for you to notice, because the thermostat is more sensitive to change than the average person and the "booster" fire quickly supplies the additional heat called for. Unlike the "stop-and-go" system, Superfex does not waste time or fuel in reheating the furnace and duct work. The additional heat quickly levels the house temperature, and causes the controls to switch back to the economical "coasting" fire.

THE SYNCHRONIZED BLOWER CONTROL

keeps the air-circulating blower operating in proportion to the fire. When the "coaster" fire is operating, the blower runs on low speed, as it does also while the

SUPERFEX furnace

provides 24-Hour Air Conditioning



KEY TO SUPERFEX

1. Oil Feed Line
2. Pilot Fire Cone
3. Burner Outer Casing
4. Combustion Air Tube
5. Combustion Air Adjustment
6. Combustion Air Blower
7. Fire Baffle
8. Steel Combustion Chamber
9. Return Air Intake
10. Economizer Baffles
11. Filters
12. Conditioned Air Blower
13. Humidifier
14. Conditioned Air Delivery
15. Double Casing
16. Automatic Damper
17. Flue Pipe
18. Filter Door
19. Economizer Cleanouts

pilot fire is on. When the "booster" fire increases the air temperature to a certain point the blower automatically is switched to more rapid circulation.

The illustration above, together with the numbered list of parts at the right, shows the simplicity of Superfex construction and operation. The "booster" flame is pictured, to show how the long-life, stainless steel baffle directs the flame toward the steel walls of the combustion chamber, which efficiently transfer the heat to air passing around the outside of the chamber.

When the "coasting" fire is operating, the flame does not touch the baffle, but its heat is still deflected

against the steel walls. The pilot fire burns entirely within the Pilot Cone.

THE LONG FLUE TRAVEL, as indicated by the yellow arrows circulating through the baffled sections of the welded steel heat economizer, utilizes heat that otherwise would be wasted, and preheats the return air drawn through the intake by the blower. The preheated air is cleaned as it is drawn through the filters, heated as it passes around the large surface of the specially shaped combustion chamber, and generously humidified as it is forced over the humidifier pan. Thus Superfex provides conditioned air every minute of the day and night, puts an end, as only Superfex can, to that cold "Leg-Zone."

Remember these **SUPERFEX** Plus Advantages...

NON-STOP AIR CONDITIONING...Superfex circulates conditioned air every minute of the day and night—does not stop and start—does not blow hot air one minute and cold air the next.

POSITIVE HUMIDITY... Superfex is the one warm air conditioning furnace that provides proper humidity at all temperatures, always in correct proportion to the heat demanded.

ECONOMICAL OPERATION...Superfex 24-Hour Air Conditioning can be enjoyed with greater comfort and less cost than "stop-and-go" furnaces of comparable heating capacity.

QUIET OPERATION...Superfex fire and blower are going all the time, yet you never hear a sound from the basement.

WARM FLOORS...Superfex continuous high-low fire synchronized with high-low blower keeps all the air in the house always in circulation, never allows floors to get cold, ceilings to get hot.

THREE-STAGE AUTOMATIC CONTROLS
... Superfex three-stage control assures absolutely even temperature at all times. Pilot fire for a stand-by

in mild weather when you don't need heat. Low or "coasting" fire keeps temperature level with thermostat setting. High, or "booster" fire catches and stops any tendency of room temperature to change.

SENSITIVE THERMOSTAT...Superfex thermostat is more sensitive to temperature change than you are—arrests any rise or fall before you can notice it.

FACTORY ASSEMBLED CONTROLS... Superfex controls come in a complete unit assembled by experts at the factory, and requiring only a few simple connections when installed.

MOST COMPLETELY REGULATED...Superfex is the most efficiently regulated oil furnace made.

SIMPLE, STURDY CONSTRUCTION... Superfex is the simplest furnace made, and the most soundly put together.

DEPENDABILITY BACKED BY QUALITY... Superfex is made by Perfection Stove Company, one of the world's oldest and largest manufacturers of cooking and heating equipment. Its dependability is assured by the high standard of manufacture maintained by this company for fifty years.

ONLY SUPERFEX
24-HOUR AIR CONDITIONING
ENDS THAT COLD "LEG-ZONE"

SPECIFICATIONS

Model Number	100-AE	200-AE	300-AE
Heating Capacity B. t. u. at Registers	85,000	120,000	150,000
Heating Capacity B. t. u. at Bonnets	95,000	130,000	165,000
Maximum Fuel Consumption	.85 Gal. per Hr.	1.2 Gal. per Hr.	1.5 Gal. per Hr.
Operating Efficiency	80%	80%	80%
Square Inches of Heating Surface	6,216	8,930	12,541
Stack Temperature	400°F.	400°F.	400°F.
Fuel	No. 2 Fuel Oil	No. 2 Fuel Oil	No. 2 Fuel Oil
Dimensions			
Height	53 $\frac{3}{4}$ "	64 $\frac{1}{2}$ "	64 $\frac{1}{2}$ "
Width	26 $\frac{1}{4}$ "	31 $\frac{1}{4}$ "	41 $\frac{1}{4}$ "
Length	50 $\frac{1}{4}$ "	61 $\frac{1}{4}$ "	67 $\frac{1}{4}$ "
Height to Center of Flue Pipe Stub	41 $\frac{1}{4}$ "	43 $\frac{3}{4}$ "	53 $\frac{1}{2}$ "
Outer Casing	20 Ga.	20 Ga.	20 Ga.
Finish	Orange-red & Black WrinkleLac Enamel	Orange-red & Black WrinkleLac Enamel	Orange-red & Black WrinkleLac Enamel
Trim		Chromium	Chromium
Flue Outlet	8"	8"	9"
Draft Regulator	Automatic Balanced	Automatic Balanced	Dual Automatic Balanced
Humidifier	Drip	Automatic	Automatic
Automatic Controls	Superflex 3-Stage Thermo- stat, Bonnet Limit Control	Superflex 3-Stage Thermo- stat, Bonnet Limit Control	Superflex 3-Stage Thermo- stat, Bonnet Limit Control
	Combination 3-Stage Oil & High-Low Blower Control	Combination 3-Stage Oil & High-Low Blower Control	Combination 3-Stage Oil & High-Low Blower Control
	Factory Wired Electric Control Panel with Summer-Winter Switches	Factory Wired Electric Control Panel with Summer-Winter Switches	Factory Wired Electric Control Panel with Summer-Winter Switches
Blower	1200 C.F.M. at $\frac{3}{16}$ " pressure. Belt drive, $\frac{1}{8}$ H. P. 2-speed capacitor motor, 110 volt, 60 cycle, single phase, alternating current.	1700 C.F.M. at $\frac{3}{16}$ " pressure. Belt drive, $\frac{1}{8}$ H. P. 2-speed capacitor motor, 110 volt, 60 cycle, single phase, alternating current.	2250 C.F.M. at $\frac{3}{16}$ " pressure. Belt drive, $\frac{1}{8}$ H. P. 2-speed capacitor motor, 110 volt, 60 cycle, single phase, alternating current.
Warm Air Opening	22" x 26"	26" x 30"	30" x 30"
Return Air Opening	22" x 14"	26" x 16"	30" x 18"
Filters	2—16" x 25" x 2" (Removable)	3—16" x 25" x 2" (Removable)	4—20" x 20" x 2" (Removable)
Shipping Weight	Approximately 550 lbs.	Approximately 750 lbs.	Approximately 1000 lbs.

NOTE: 101-AE is similar to 100-AE, except that it has a single speed blower instead of High-Low blower, High-Low burner instead of 3-stage, and no Summer-Winter switches. All of the above models may be had with plain black baked enamel finish instead of orange-red enamel. Black models are Nos. 100-A, 101-A, 200-A, 300-A.

A RECOMMENDATION CONCERNING LOCATION AND TYPE OF REGISTERS

We recommend that all warm air registers or grilles be located at or near the floor line, and be provided with louvers which will direct the air toward the floor . . . All registers or grilles, both for warm air and return air, should be provided with shut-off valves.

It is advisable to close all bedroom registers and grilles at night when the windows are open.

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{Incorporated}
CLEVELAND, OHIO

●
Manufacturers of

Perfection, Puritan and Ivanhoe Oil Burning Ranges and Cook Stoves, Full Splasher Backs and "Live-Heat" Ovens, Perfection Oil Burning Room Heaters; Perfection, Puritan and Superfex Oil Burning Water Heaters; Perfection Wicks and Accessories; Superfex Oil Burning Refrigerators; Superfex Oil Burning Heaters and Heat Projectors; Superfex Oil and Gas Burning Air Conditioning Furnaces.

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PERFECTION STOVE COMPANY

